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### (54) PREPARATION OF CALCINED TITANIUM OXIDE AND CATALYST

#### (57)Abstract:

PURPOSE: To prepare the titled calcined material, having a large surface area and improved strength and heat resistance, and suitable for a catalyst or a catalytic carrier, by calcining metatitanic in the form of a sol containing a tungsten compound and/or a molybdenum compound.

CONSTITUTION: Metatitanic acid in the form of a sol containing a tungsten compound, e.g. tungsten oxide, and/or a molybdenum compound, e.g. molybdenum oxide, as an additive is calcined to prepare a calcined titanium oxide. The tungsten compound or molybdenum compound or both are used as an additive and present in the metatitanic acid in the form of the sol, and the resultant metatitanic acid is calcined to suppress the crystal growth of the titanium oxide and make the titanium oxide remain in the ungrown anatase type crystal in the calcination. Thus, the aimed calcined material having a large surface area and improved mechanical strength and heat resistance can be obtained. The resultant calcined titanium oxide is used as a carrier for supporting a specific metallic oxide to give an unconventional improved catalyst for removing nitrogen oxide having the synergistic action of the respective oxides in the carrier and the metallic oxide.

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